



WELL PLUGGING PLAN OF OPERATIONS



NOTE: A Well Plugging Plan of Operations shall be filed with and accepted by the Office of the State Engineer prior to plugging.

I. FILING FEE: There is no filing fee for this form.

II. GENERAL / WELL OWNERSHIP:

Existing Office of the State Engineer POD Number (Well Number) for well to be plugged: B-28-1605 POD407

Name of well owner: Homestake Mining Company

Mailing address: PO Box 98

City: Grants State: NM Zip code: 87020

Phone number: 505-287-4456 E-mail: jtoepfer@barrick.com

III. WELL DRILLER INFORMATION:

Well Driller contracted to provide plugging services: Coyote Drilling Inc.

New Mexico Well Driller License No.: 1451 Expiration Date: 7/31/16

IV. WELL INFORMATION:

Note: A copy of the existing Well Record for the well to be plugged should be attached to this plan.

1) GPS Well Location: Latitude: 35 deg, 15 min, 19.81 sec
Longitude: 107 deg, 51 min, 42.30 sec, NAD 83

2) Reason(s) for plugging well:

Compromised Casing

3) Was well used for any type of monitoring program? No If yes, please use section VII of this form to detail what hydrogeologic parameters were monitored. If the well was used to monitor contaminated or poor quality water, authorization from the New Mexico Environment Department may be required prior to plugging.

4) Does the well tap brackish, saline, or otherwise poor quality water? No If yes, provide additional detail, including analytical results and/or laboratory report(s):

5) Static water level: 134 feet below land surface / feet above land surface (circle one)

6) Depth of the well: 324 feet

- 7) Inside diameter of innermost casing: 20 inches.
- 8) Casing material: Steel
- 9) The well was constructed with:
☒ an open-hole production interval, state the open interval: 312-324
☐ a well screen or perforated pipe, state the screened interval(s): _____
- 10) What annular interval surrounding the artesian casing of this well is cement-grouted? Assume No
- 11) Was the well built with surface casing? No If yes, is the annulus surrounding the surface casing grouted or otherwise sealed? No If yes, please describe:
- 12) Has all pumping equipment and associated piping been removed from the well? Yes If not, describe remaining equipment and intentions to remove prior to plugging in Section VII of this form.

V. DESCRIPTION OF PLANNED WELL PLUGGING:

Note: If this plan proposes to plug an artesian well in a way other than with cement grout, placed bottom to top with a tremie pipe, a detailed diagram of the well showing proposed final plugged configuration shall be attached, as well as any additional technical information, such as geophysical logs, that are necessary to adequately describe the proposal.

- 1) Describe the method by which cement grout shall be placed in the well, or describe requested plugging methodology proposed for the well:

Bentonite chips, with limited amounts of graded silica sand if needed, from 324' to 302' BGL placed by tremie pipe, cement grout placed by tremie pipe from 302' to 282' BGL, rip casing from 282' to 40' BGL, pressure grout 285' to 2' BGL by tremie pipe.
- 2) Will well head be cut-off below land surface after plugging? Yes

VI. PLUGGING AND SEALING MATERIALS:

Note: The plugging of a well that taps poor quality water may require the use of a specialty cement or specialty sealant

- 1) For plugging intervals that employ cement grout, complete and attach Table A.
- 2) For plugging intervals that will employ approved non-cement based sealant(s), complete and attach Table B.
- 3) Theoretical volume of grout required to plug the well to land surface: N/A
- 4) Type of Cement proposed: Portland Cement
- 5) Proposed cement grout mix: 6 gallons of water per 94 pound sack of Portland cement.
- 6) Will the grout be: X batch-mixed and delivered to the site
 _____ mixed on site

7) Grout additives requested, and percent by dry weight relative to cement:

N/A

8) Additional notes and calculations:

VII. ADDITIONAL INFORMATION: List additional information below, or on separate sheet(s):

VIII. SIGNATURE:

I, Jesse Toepfer, say that I have carefully read the foregoing Well Plugging Plan of Operations and any attachments, which are a part hereof; that I am familiar with the rules and regulations of the State Engineer pertaining to the plugging of wells and will comply with them, and that each and all of the statements in the Well Plugging Plan of Operations and attachments are true to the best of my knowledge and belief.

Signature of Applicant

Date

IX. ACTION OF THE STATE ENGINEER:

This Well Plugging Plan of Operations is:

_____ Approved subject to the attached conditions.

_____ Not approved for the reasons provided on the attached letter.

Witness my hand and official seal this _____ day of _____, _____

Tom Blaine P.E., New Mexico State Engineer

By: _____

TABLE A - For plugging intervals that employ cement grout. Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of grout placement (ft bgl)	282	282	
Bottom of proposed interval of grout placement (ft bgl)	302	2	
Theoretical volume of grout required per interval (gallons)	330	4570	
Proposed cement grout mix gallons of water per 94-lb. sack of Portland cement	6	6	
Mixed on-site or batch-mixed and delivered?	Batch-mixed	Batch-mixed	
Grout additive 1 requested	N/A	N/A	
Additive 1 percent by dry weight relative to cement			
Grout additive 2 requested	N/A	N/A	
Additive 2 percent by dry weight relative to cement			

Note: Volume may be larger due to movement beyond the inside of casing.

TABLE B - For plugging intervals that will employ approved non-cement based sealant(s). Start with deepest interval.

	Interval 1 – deepest	Interval 2	Interval 3 – most shallow
			Note: if the well is non-artesian and breaches only one aquifer, use only this column.
Top of proposed interval of sealant placement (ft bgl)	302		
Bottom of proposed sealant of grout placement (ft bgl)	324		
Theoretical volume of sealant required per interval (gallons)	360		
Proposed abandonment sealant (manufacturer and trade name)	Bentonite Chips		